



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,451	04/12/2004	Chee-Shuen Lee	JCLA12897	4715

23900 7590 10/03/2006

J C PATENTS, INC.  
4 VENTURE, SUITE 250  
IRVINE, CA 92618

EXAMINER

MRUK, GEOFFREY S

ART UNIT	PAPER NUMBER
----------	--------------

2853

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/823,451

Applicant(s)

LEE ET AL.

Examiner

Geoffrey Mruk

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24, 27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 14-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-13, 27, and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4/12/04 7/6/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 1-7 and 14-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 17 August 2006.

Applicant's election with traverse of Species II in the reply filed on t 2006 is acknowledged. The traversal is on the ground(s) that the nonelected species can be reasonably considered together. This is not found persuasive because although there is no requirement to show separate classification in regards to an election of species, a burden does exist because a separate search would be required.

The requirement is still deemed proper and is therefore made FINAL.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

The drawings were received on 12 April 2004 are accepted.

### ***Claim Objections***

Claim 27 is objected to because of the following informalities: claim 27 states “the first ink channel allows an ink to supply into the ink chamber, the ink chamber has a plurality of chamber walls and at least one of the chamber walls, at least one of the chamber walls caves in to form at least a collecting room.” There appears to be a grammatical error.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8-12, 27, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Rapp et al. (US 6,626,522 B2).

With respect to claim 8, Rapp discloses an inkjet print head (Column 1, lines 6-8), comprising:

- an ink chip (Fig. 3, element 10), having a surface and at least an ink slot (Fig. 3, element 18) formed through the ink chip;
- at least a heater (Column 2, line 67), formed on the surface of the ink chip;

Art Unit: 2853

- a chamber layer (Fig. 3, element 22), having at least a first ink channel (Fig. 3, element 26B) and at least an ink chamber (Fig. 3, element 14), formed on the surface of the ink chip, the ink chamber exposing the heater, the ink chamber connecting to the ink slot by the first ink channel, the ink chamber having a plurality of chamber walls (Fig. 3, element 22 that forms element 14) and at least one of the chamber walls caves in (Fig. 3, element 26C) to form at least a collecting room (Fig. 3, element 22 that forms element 26C); and
- a nozzle plate (Column 2, line 65), having at least a nozzle (Column 2, line 64) that is formed through the nozzle plate positioned on the chamber layer, wherein the nozzle is above the heater (Fig. 1; Column 6, lines 9-11).

With respect to claim 9, Rapp discloses the print head further comprises an island (Fig. 3, element 24) formed on the surface of the ink chip (Fig. 3, element 10) between the first ink channel (Fig. 3, element 26B) and the ink slot (Fig. 3, element 18).

With respect to claim 10, Rapp discloses the chamber layer (Fig. 3, element 22) further comprises a pair of (see Figure 3 below) with each first ink-channeling surface being positioned on each side of the first ink channel (Fig. 3, element 26B).

With respect to claim 11, Rapp discloses the island (Fig. 3, element 24) has a pair of second ink-channeling surfaces (see Figure 3 below) such that the first ink-channeling surfaces and the second ink-channeling surfaces (see Figure 3 below) together form a pair of second ink channels (Fig. 3, element 26A) that join with the first ink channel.

Art Unit: 2853

With respect to claim 12, Rapp discloses each first ink-channeling surface and its corresponding second ink-channeling surface are parallel to each other (see Figure 3 below; Column 4, lines 36-46, i.e. elements are masked together).

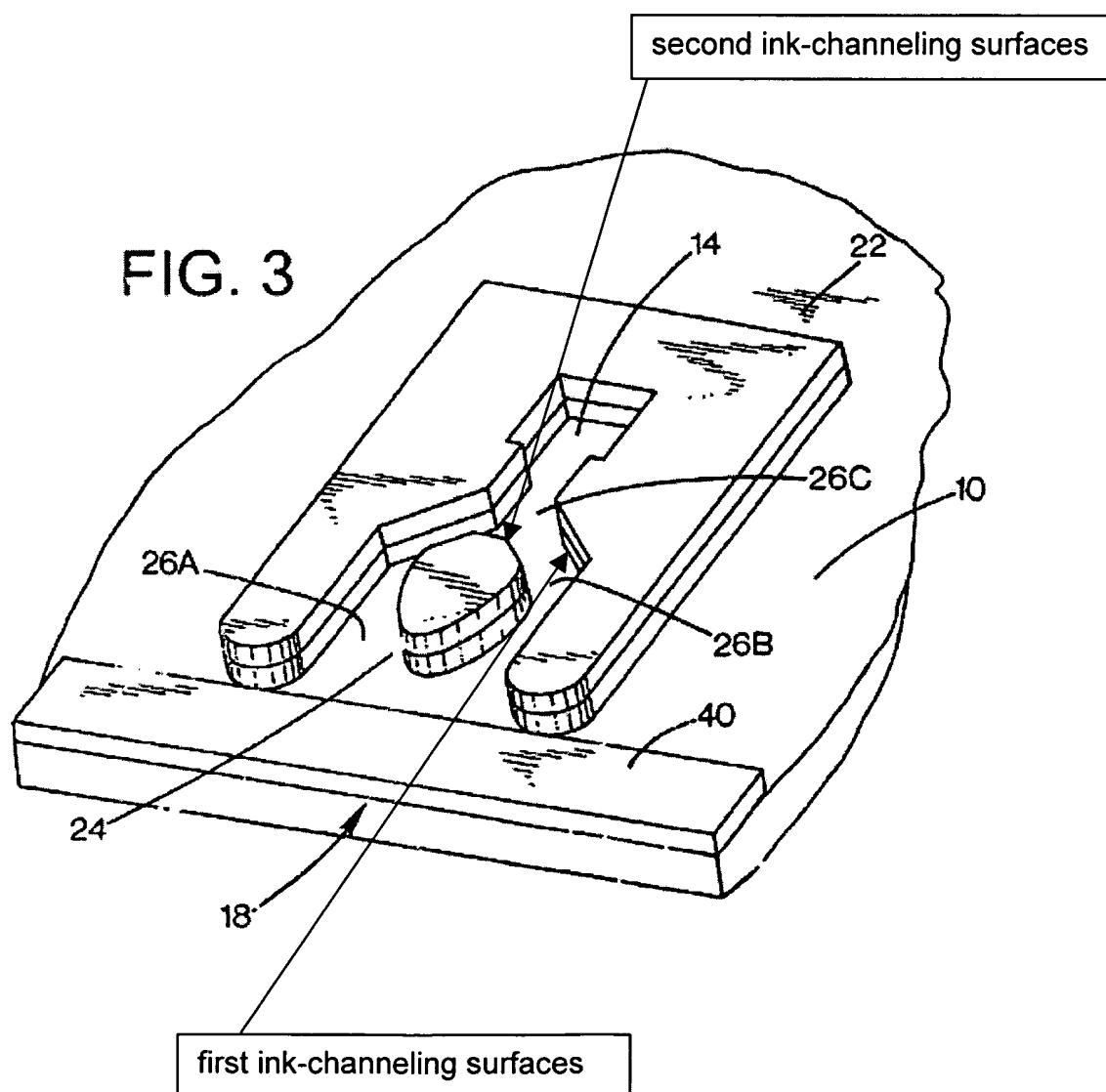
With respect to claim 27, Rapp discloses an inkjet print head (Column 1, lines 6-8), comprising:

- an ink chip (Fig. 3, element 10), having a surface;
- at least a heater (Column 2, line 67), formed on the surface of the ink chip; and
- a nozzle structural layer (Column 2, line 65), having at least a first ink channel (Fig. 3, element 26B), at least an ink chamber (Fig. 3, element 14) and at least a nozzle (Column 2, line 64), positioned on the surface of the ink chip, wherein the ink chamber exposes the heater, the first ink channel allows an ink to supply into the ink chamber, the ink chamber has a plurality of chamber walls (Fig. 3, element 22 that forms element 14) and at least one of the chamber walls caves in (Fig. 3, element 26C) to form at least a collecting room (Fig. 3, element 22 that forms element 26C) and the nozzle is above the heater and corresponds to the ink chamber.

With respect to claim 28, Rapp discloses an inkjet print head, comprising:

- an ink chip (Fig. 4, element 10) with a surface and at least an ink slot (Fig. 4, element 18) formed through the ink chip;
- at least a heater (Column 2, line 67), formed on the surface of the ink chip;
- a nozzle structural layer (Column 2, line 65) having at least a first ink channel (Fig. 4, element 26C), at least an ink chamber (Fig. 4, element 14) and at least a

nozzle (Column 2, line 64), positioned on the surface of the ink chip, the ink chamber exposing the heater and the ink chamber connecting to the ink slot by the first ink channel, the ink chamber having a plurality of chamber walls (Fig. 4 element 22-1 that forms element 14), at least one of the chamber walls caving in (Fig. 4, element 26C) to form at least a collecting room (Fig. 4 element 22-1 that forms element 26C) and the nozzle being above the heater and corresponding to the ink chamber.



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rapp et al. (US 6,626,522 B2) in view of Mizutani (US 6,659,594 B2).

With respect to claim 13, Rapp discloses the nozzle is positioned directly above the collecting room (Fig. 1, element 9; Fig. 1, element 22 that forms element 26C).

However, Rapp fails to disclose the nozzle is not positioned directly above the collecting room.

Mizutani discloses an inkjet recording head where "the positions of the energy generating elements are relatively off-set with respect to the positions of the ink ejecting ports" (Column 3, lines 58-60).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the nozzle positioning with respect to the energy generating elements disclosed by Mizutani in the printhead disclosed by Rapp. The motivation for doing so would have been "the linearity of an image can be maintained even if the timeshared drive is executed" (Column 3, lines 61-62).




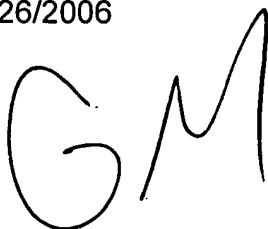
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is 571 272-2810. The examiner can normally be reached on 7am - 330pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GSM  
9/26/2006



**STEPHEN MEIER**  
SUPERVISORY PATENT EXAMINER